WHAT IS CLAIMED IS:

1. A metal detection circuit comprising:

a power source;

at least one transmitter circuit electrically coupled to the power source;

a transmit coil electrically coupled to the at least one transmitter circuit;

at least one receiver coil;

an amplifier electrically coupled to the at least one receiver coil;

an integrator electrically coupled to the amplifier;

a track/hold circuit electrically coupled to the integrator; and

a filter electrically coupled to the track/hold circuit and an output.

2. A circuit in accordance with claim 1 wherein the filter is a bandpass filter.

3. A circuit in accordance with claim1 wherein the transmitter circuit comprises a coil charge circuit.

4. A circuit in accordance with claim 1 comprising two receiver coils each electrically coupled to the amplifier.

5. A circuit in accordance with claim 1 wherein the track/hold circuit comprises a first stage that includes an input resistor, an op-amp, an integrator capacitor, and a C-Mos SPDT switch, and a second stage that includes two passive RC filters and an op-amp buffer.

6. A circuit in accordance with claim 1 wherein the power source comprises a voltage source in the form of one of a battery, a battery of solar cells, a standard A/C source or a generator.

7. A metal detection circuit arrangement for a portable walk-through metal detector comprising a plurality of opposing pairs of sensor panels, each sensor panel pair comprising a circuit portion comprising:

at least one transmitter circuit electrically coupled to the power source;

a transmit coil electrically coupled to the at least one transmitter circuit;

at least one receiver coil;

an amplifier electrically coupled to the at least one receiver coil;

an integrator electrically coupled to the amplifier;

a track/hold circuit electrically coupled to the integrator; and

a filter electrically coupled to the track/hold circuit and an output.

8. A circuit arrangement in accordance with claim 7 wherein the filter is a bandpass filter.

9. A circuit arrangement in accordance with claim7 wherein the transmitter circuit comprises a coil charge circuit.

10. A circuit arrangement in accordance with claim 7 wherein each circuit portion comprises two receiver coils each electrically coupled to the amplifier.

11. A circuit arrangement in accordance with claim 7 wherein the track/hold circuit comprises a first stage that includes an input resistor, an op-amp, an integrator capacitor, and a C-Mos SPDT switch, and a second stage that includes two passive RC filters and an op-amp buffer.

12. A circuit arrangement in accordance with claim 7 further comprising a power source comprising at least one voltage source in the form of one of a battery, a battery of solar cells, a standard A/C source or a generator.

13. A modular walk-through metal detector comprising:

a plurality of separate sensor panels arranged in opposing pairs electrically coupled to each other and arranged one above the other along two separate sides to form two side walls; and

at least one top cross-member that engages each side wall;

wherein each opposing sensor panel pair comprises a circuit portion comprising:

at least one transmitter circuit electrically coupled to the power source;

a transmit coil electrically coupled to the at least one transmitter circuit;

at least one receiver coil;

an amplifier electrically coupled to the at least one receiver coil;

an integrator electrically coupled to the amplifier;

a track/hold circuit electrically coupled to the integrator; and

a filter electrically coupled to the track/hold circuit and an output.

14. A metal detector in accordance with claim 13 wherein the filter is a bandpass filter.

15. A metal detector in accordance with claim 13 wherein the transmitter circuit comprises a coil charge circuit.

16. A metal detector in accordance with claim 13 wherein each circuit portion comprises two receiver coils each electrically coupled to the amplifier.

17. A metal detector in accordance with claim 13 wherein the track/hold circuit comprises a first stage that includes an input resistor, an op-amp, an integrator capacitor, and a C-Mos SPDT switch, and a second stage that includes two passive RC filters and an op-amp buffer.

18. A metal detector in accordance with claim 13 further comprising a power source comprising at least one voltage source in the form of one of a battery, a battery of solar cells, a standard A/C source or a generator.

19. A metal detector in accordance with claim 13 wherein each opposing sensor panel pair is interchangeable.

20. A metal detector in accordance with claim 13 further comprising at least one base coupled to each side wall.

21. A metal detector in accordance with claim 13 wherein the base comprises at least two base members.

22. A metal detector in accordance with claim 13 wherein the metal detector comprises six sensor panels, each side wall comprising three sensor panels.

23. A metal detector in accordance with claim 13 wherein each sensor panel comprises windowed areas.

24. A metal detector in accordance with claim 23 wherein each sensor panel comprises a weather-proof construction.

25. A metal detector in accordance with claim 13 wherein the sensor panels may be stored in the top cross-member and the top cross member includes at least one handle and at least two wheels.